V PANEL

104 / 121 / 150 / 170 / 190

User manual

Rel. 08.2005 Ver.01

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The German version of this manual is not available.
Die deutsche Version ist nicht verfügbar.

Manual History

Date	Version	Changes
Aug.2005	01	First edition

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TRADEMARKS

All trademarks mentioned in this manual are registered properly of the respective owners.

CE-CONFORMITY

The following requirements, standards, specifications constitute part of the declaration:

EN	55022 class A	EN	55024	EN	60950
EN	61000-3-2	EN	61000-3-3	EN	61000-6-2

The validation of this declaration depends on the properly use of the product.

FCC Class A Radio Frequency

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to 1/47 CFR Part 15.109 Class A of FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

FC Test to Comply With FCC Standards For industrial use

The limits of FCC Part15 class A are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interfer-

ence to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by more of one or more of the following measures:

1. Reorient or relocate the receiving antenna
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
4. Consult the dealer or an experienced radio/television technican for help.

Notice1: The changes or modifications not expressly approved by the party responsible for compliance could void the user`s authority to operate the equipment.
Notice2: Shielded interface cables, if any, must be used in order to comply with emission limits.

CAUTION !

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

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1. INTRODUCTION

1.1. APPROPRIATE USE

The main purpose of the V Panel is the use and operation with 24VDC-power-sources.

The surrounding area of the Panel are dry rooms.

The Panel is intended for industrial applications in machine and plant control engineering.

The user is not entitled to change the system components or open the body without consultation to Kontron.

1.2 ITEM CHECKLIST

Your Panel comes securely packaged in solid shipping carton(s). Upon receiving your Panel, open the carton(s) and remove the contents carefully.

The shipping carton should contain the following items:

- V Panel 10,4” 12,1” 15” 17” or 19”
- CPU Support CD (optional)
- 24V DC Power cord (optional)
- This user manual (optional)
- Software installation CD if implemented

Carefully inspect each component to ensure that nothing is missing and/or damaged. If any of these items is missing or damaged, please contact Kontron immediately. Preserve of of the packing material for future transportation.

1.3 IMPORTANT SAFETY INSTRUCTIONS

This section gives you detailed information about how to maintain a safe environment while using the Panel. You can maintain its condition and performance by following these guidelines. Please read it carefully to ensure maximum safety.

Be careful about the power supply input voltage. The Panel has specific power requirements.

Please prevent the Panel from humidity.

Never pour any liquid on the Panel, this may cause fire or electrical shock. Place the Panel on a reliable surface when installing. A drop or fall may cause damage.

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Do not leave the Panel in an unconditional environment. Storage temperature above 70°C may damage the Panel.

The opening on the enclosure are for air convection, protect the Panel from overheating.

DO NOT COVER THE OPENINGS

If the Panel is not in use for a long time, disconnect it from mains to avoid possible damage by transient overvoltage.

If you had to open the housing of the Panel in service cases, all single parts of the plant must first be switched off, after which the Panel can be disconnected from the plant. Secure each part against accidentally switched on during service.

Following service activities on the Panel could cause failures.

- Metal objects such as screws or tools fall on or in the Panel
- Cables are removed or inserted during operation.
- Plug-in cards are removed or inserted during the Panel is switched on.

All cautions and warnings on the Panel should be noted.

The system has to shut down and checked immediately by service staff, if one of the following situation appears:

- The power cord or plug is damaged.
- Liquid has penetrated the Panel.
- The Panel is exposed to moisture.
- Obvious sign of breakage are visible.
- System did not work properly or you can not get it work according to the application requirements.

2. OVERVIEW

The Kontron V Panel computer is a high performance system. The compact design enables an integration even under the condition of very restricted spaces. Our 100% industiy capable, scalable Panel meet the highest requirements concerning shock, vibration and temperature resistance. The system also provides a high resistance under tough EMC conditions.

Features:

- Display sizes 10,4“ 12,1“ 15” 17” and 19”
- Display type TFT active Matrix LCD with resistive touch.
- Color depth up to 32 bit
- Max. Resolution 1280x 1024
- Intel Pentium M Processor up to 1.1 Ghz
- Main memory up to 1024 MB on SDRAM
- Standard interfaces 3x USB, 2x PS/2, 1x LPT, 2x LAN, 4x RS232
- Input power of 24 VDC
- Installation of two PCI extension cards.
- Front side protection in IP65 (conform to EN 60529)
- Operating temperature up to 50°C
- Operating system Windows and Linux
- Dimension 10.4” 295mm x 348mm x 121mm
  12.1” 327mm x 400mm x 121mm
  15.0” 362mm x 452mm x 123mm
  17.0” 390mm x 465mm x 130mm
  19.0” 426mm x 516mm x 135mm
- All connectors build for industrial standards
- Shock and vibration tested
- Embedded architecture long-life electronic components
- Optional:Stainless steel front, front USB, Power ON switch, power LED

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3. HARDWARE INSTALLATION

Attention!

The weight of the Panel is about 7kg
Carry it on with both hands!

The Panel of this type is developed to work in a control cabinet. Thereby it must be pointed that all the environmental conditions must be considered.

When installing the Panel take care that there is enough area for ventilations on rear side. For details go to item housing dimensions.

If your Panel was delivered without software install a keyboard and mouse.

If operating system and software is installed, the touch is working and calibrated.

Look up for further settings e.g. BIOS on the ETX board manuals.

3.1 CONNECT EXTERNAL DEVICES

To get detailed information about pinout of each connector please look to chapter “technical details”.

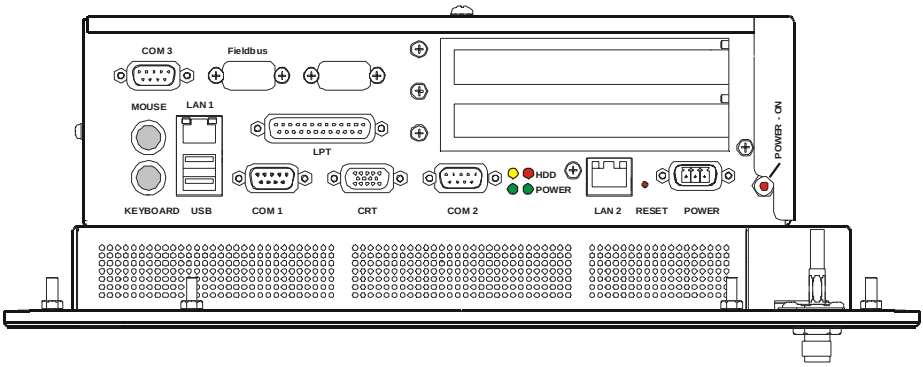

Fig. 3-1

3.1.1 PS/2 Keyboard and Mouse

Use this connector to connect PS/2 mouse and keyboard.

3.1.2 LAN1 Port

This connector provides a external interfaces 10/100 BaseT on RJ45 to connect your Panel to other devices in a network.

3.1.3 USB port
This connector provides two external USB 2.0 interfaces

3.1.4 Parallel port LPT
Use this port to connect a printer or other parallel devices.

3.1.5 Serial Interface COM1, COM2, COM3
Three serial interfaces enables you to connect a external device with 9 pin DSUB connector such as mouse or modem. COM2 is selectable as a input for programming fielbuscontroller.

3.1.6 Fieldbus interface CAN / CANOpen / Profibus / DeviceNet
External connector of internal fieldbus controller. Interface to connect CAN, CANOpen, Profibus/MPI or DeviceNet devices. All interfaces in master or slave configuration available.

3.1.7 CRT Monitor
Connector and interface to VGA/CRT monitor .

3.1.8 Second LAN2 Port
This connector provides a second external interfaces 10/100/1000 BaseT on RJ45 connector to your panel to other devices in a network.

3.1.9 Reset
Reset Switch reset the hole unit.

3.1.10 Main power IN
Use this connector to connect the power supply of 24VDC. Please note the Power requirements (See chapter technical details).

3.1.11 Power ON button
Enables you to switch on and off the main system**.**

3.1.13 Front USB
Use this port behind a cover to connect USB devices direct on the panel front

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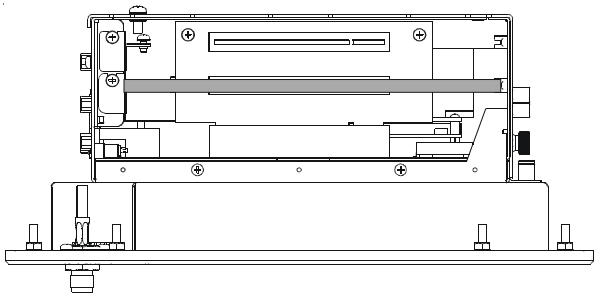
3.2 CONNECT INTERNAL DEVICES

The panel provides additional functions which could be implemented in the system by adding cards or changing the configuration of your Panel.



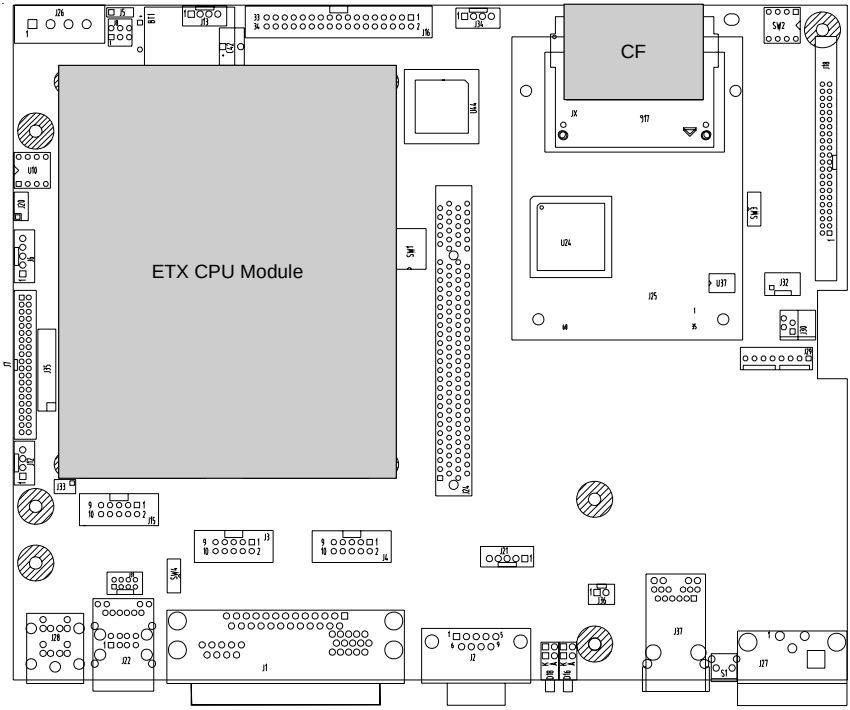


Fig. 3-2

Connector	Interface
J3	Serial port COM3
J4	Serial port COM4
J6	Backlight interface
J12	Advanced power button interface
J13	External battery connector
J15	Internal Fieldbus interface
J16	Floppy disk drive interface
J17	Secondary IDE Compact flash
J18	Primary IDE Connector UDMA33
J21	IrDA/FIR connector
J24	PCI extension card
J25	PCMCIA
J26	Internal HDD power interface
J29	4-5 wire Tochconnector
J30	DMC touchcontroller interface (option)
J31/J32	Internal USB interfaces
J34	Speaker interface
J36	ATX Power button

3.3 INTERNAL JUMPER SETTING

To identify the jumper location please look to the board layout in Fig.3.2. All described functions refers to the implemented baseboard.

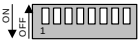
3.3.1 Backlight supply voltage J5

Setting	Backlight supply voltage
1-2 (default)	12V
2-3	5V

3.3.2 Voltage supplied to display J8

Setting	Display supply voltage
1-6 (default)	3V
2-5	5V
3-4	12V

3.3.3 Address range NVSRAM Switch DIP1 SW1



Setting SW1 DIP1	NVSRAM address
OFF	CC000 – CFFFF (Hex)
ON	D0000 – D7000 (Hex)

*TO ENABLE THE NVSRAM DIP8 ON SW1 MUST BE SET TO OFF. IF SJA1000 CHIP SIS POPULATED DIP2 ON SW1 MUST BE SET TO OFF.

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3.3.4 Address range fielbus controller EC1 SW1

Setting SW1 DIP2	Base address fielbus contr. EC1
ON	CA000 – CBFFF (Hex)
OFF	DA000 – DB000 (Hex) and SJA1000 fieldbuscontroller populated

3.3.5 Fieldbus Contrl. SJ1000 Interrupt (optional) SW1

Setiing SW1			
DIP3	DIP4	DIP5	Interrupt request
OFF	OFF	OFF	IRQ3
OFF	OFF	ON	IRQ4
OFF	ON	OFF	IRQ5
OFF	ON	ON	IRQ7
ON	OFF	OFF	IRQ10
ON	OFF	ON	IRQ11
ON	ON	OFF	No fieldbus installed
ON	ON	ON	No interrupt

3.3.6 Fieldbus Contrl. SJ1000 IO Address (optional) SW1

Setting SW1			
DIP6	DIP7	DIP8	IO-address
OFF	OFF	OFF	IRQ3
OFF	OFF	ON	IRQ4
OFF	ON	OFF	IRQ5
OFF	ON	ON	IRQ7
ON	OFF	OFF	IRQ10
ON	OFF	ON	IRQ11
ON	ON	OFF	No fieldbus installed
ON	ON	ON	No interrupt

3.3.7 Master-Slave configuration of Compact Flash SW2

Setting SW2 DIP1	Function Compact Flash
OFF (default)	Master
ON	Slave

3.3.8 I/O configuration of COM2 SW2

Setting SW2 DIP2	Function Compact Flash
OFF (default)	COM2
ON	Input for external programming EC1

3.3.9 Function front power bottom SW2

Setting SW2 DIP3	Funktion Compact Flash
OFF	Powerbutton J12 disabled
ON (default)	Powerbutton J12 enabled

3.3.10 Configuration USB Port 2 SW2

Setting SW2 DIP4	Funktion Compact Flash
OFF (default)	USB Port 2 enabled
ON	USB Port 2 disabled

3.3.11 Communication port to touchcontroller SW3

Setting SW3 DIP1	Communication port COM
OFF	COM1
ON	COM4

3.3.12 Touch wire configurationr SW3

Setting SW3 DIP2	Touchtype
OFF	5 wire
ON	4 wire

3.3.13 Output configuration USB Port 0 SW4

Setting SW4 DIP1	USB Port 0
OFF (default)	External Connector J22
ON	Internal Connector J31

3.3.14 Output configuration USB Port I SW4

Setting SW4 DIP2	USB Port 1
OFF (default)	External Connector J22
ON	Internal Connector J31

3.4 LED STATUS INDICATORS

3.3.1 Power LED D16 bottom

Description	**ON green**	**OFF**
POWER	POWER OK	No power

3.3.2 HDD LED D16 top

Description	**ON red**	**OFF**
HDD activity	Datatranfer from/to HDD	No access

3.3.3 Fieldbus status

Status including possible fieldbus modules

Baseboard LED D18		**CanOpen and Profibus Module**		**DeviceNet Module**	**Indicated Status**
Top Ready (yellow)	Bottom RUN (green)	ERROR D1	Status D2	ERROR D3	
Flashing irregular	OFF	OFF	OFF	OFF	Fieldbus hardware error
Flashing cyclic	OFF	OFF	OFF	OFF	Bootstraploader active
ON	Flashing irregular	OFF	OFF	RED	No slave or fieldbus not connected
ON	Flashing cyclic	OFF	ON	-	PC applikation not redy
ON	Flashing cyclic	ON	OFF	-	Short circuite at fieldbus
ON	Flashing cyclic	ON	ON	RED	No slave or fielbus not connected
ON	ON	ON	ON	RED	At least one slave is missing
ON	ON	OFF	ON	GREEN	Communication is running faultless

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4 SOFTWARE INSTALLATION

4.1 APPLICATION SOFTWARE AND OPERATING SYSTEM

The panel is designed to work with different operating systems. To install operating system or application software follow the installation instructions of the software.

4.2 HARDWARE DRIVERS

On preinstalled systems no drivers had to be installed by a technican or user. If no operating system was installed, you had to install drivers for the implemented hardware to get full function of the panel. All the drivers are stored on the provided Support CD. Drivers also available at the online support at

http://www.kontron.com.

If you need additional help please contact Kontron customer service.

4.2.1 Install Touch driver

Installed touch controllers

Installed Touch	10,4”		12,1”		15”		17”		19”	
	SS	ALU	SS	ALU	SS	ALU	SS	ALU	SS	ALU
Elo touchcontroller						X		X	X	X
DMC touchcontroller	X	X	X	X	X		X			

SS=stainless steel Front bezel , ALU= Aluminium Front bezel

Preparations of system

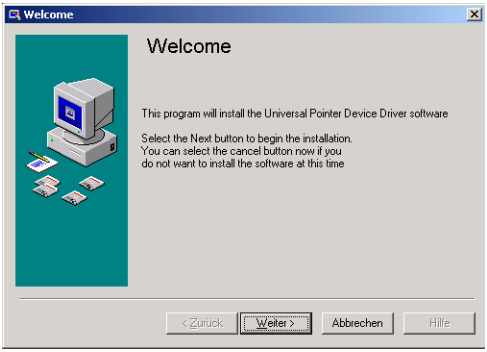
Before installing the driver please check the following items.

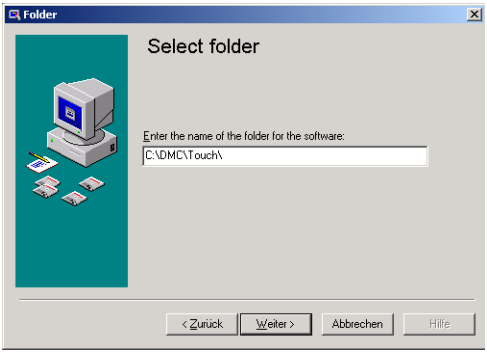
- USB Port in BIOS enabled
- USB Port driver for operating system installed.
- Device for loading the drivers is installed
- Optional: download driver from WEB

Install DMC touch driver

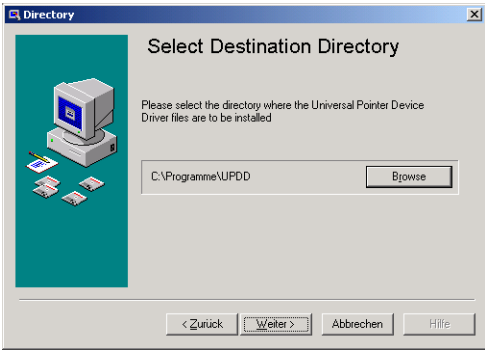
Installation procedure

To start driver installation please go to the folder where all the driver files are stored. Start driver installation by double click on file “SETUP.exe” in the respective folder. Confirm each opened window with “NEXT” when choice is done. Please observe that during installation no error occurs.


Welcome
Welcome
This program will install the Universal Pointer Device Driver software
Select the Next button to begin the installation.
You can select the cancel button now if you
do not want to install the software at this time
< Zurück
Weiter >
Abbrechen
Hilfe



>>Start installation and set folder



>>Choose your destination folder

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>>Choose display of touch icon in system tray

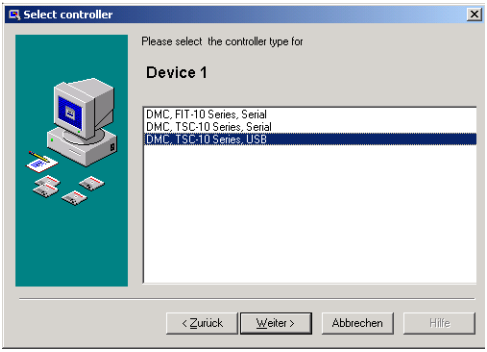
Number of devices
Number of devices
This software supports the connection of multiple devices subject to the availability of the appropriate hardware
Please specify how many devices are to be attached to the system
Number of devices: 1
< Zurück
Weiter >
Abbrechen
Hilfe

>>Select installed touch controllers

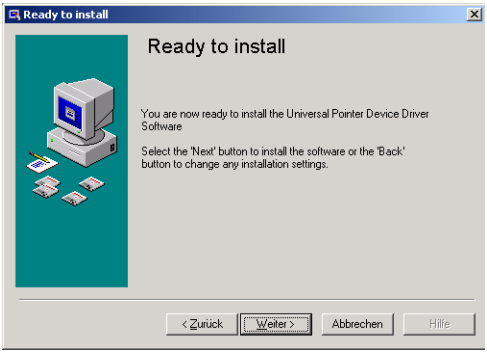
Value: **1**

Desktop segment
Define device # 1
Setup will now collect some information for this device
If you wish to alter any of these settings later you may do so through the Pointer Devices option in the control panel
Select the logical desktop segment for this device:
Whole Desktop
Please also enter a name to identify this device:
Device 1
< Zurück
Weiter >
Abbrechen
Hilfe

>>Select spread of touch on display
Value line 1:“**Whole Desktop**”
Value line 2:“**Device1**”



>> Select controler type
Value: **DMC TSC-10 Series USB**


Ready to install
Ready to install
You are now ready to install the Universal Pointer Device Driver Software
Select the 'Next' button to install the software or the 'Back' button to change any installation settings.
< Zurück
Weiter >
Abbrechen
Hilfe

>> Installation

Calibration
To get the according touch function you had to calibrate the touch.
To do this go to START/Programs/DMC/ Calibrate
Do the calibration with a touch stick on the displayed arrows.

Install ELO touch driver
Installation procedure
To start driver installation please go to the folder where the driver files are stored. Start driver installation by double click on file “SW500930.exe” in the respective folder. Confirm each opened window with “**OK**” or “**NEXT**” when choice is done.

Please observe that during installation no error occurs.

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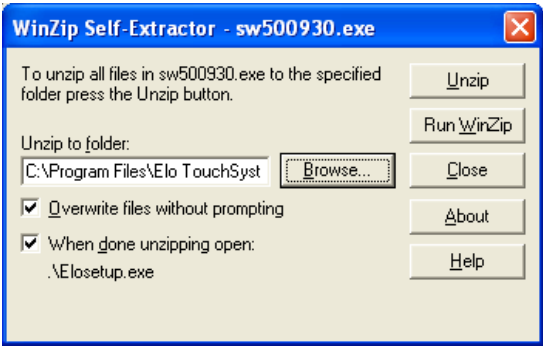
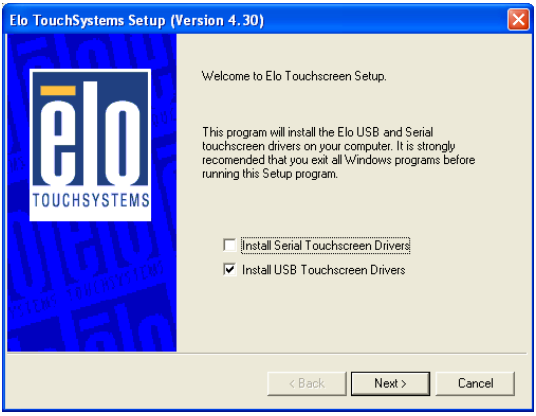
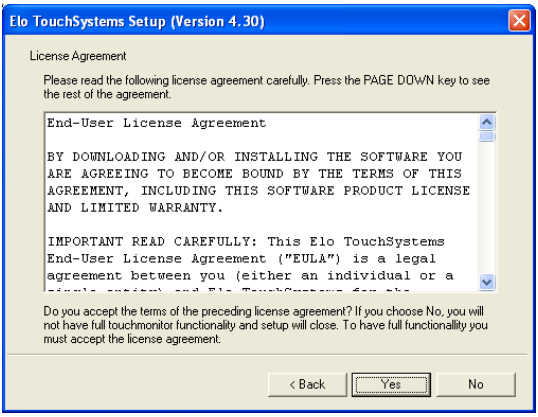
WinZip Self-Extractor
Welcome to Elo Universal Driver for Windows XP/2000 Installer.
Driver Version 4.30 (06-02-2005)
Click OK to continue.
OK



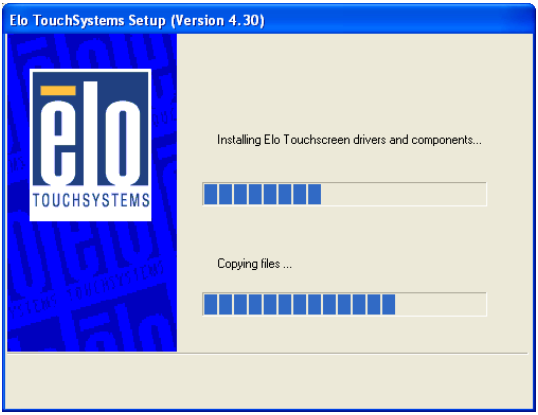
>> Choose your destination folder to extract files

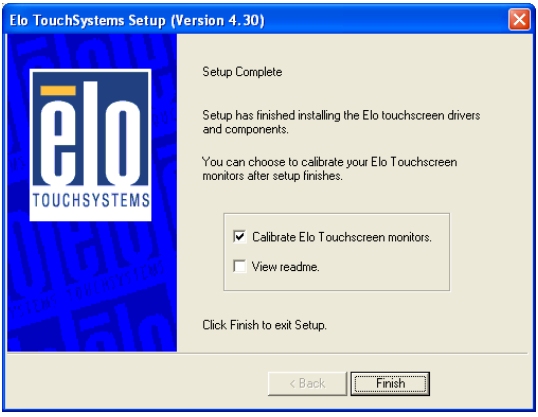

Elo TouchSystems Setup (Version 4.30)
TOUCHSYSTEMS
Welcome to Elo Touchscreen Setup.
This program will install the Elo USB and Serial touchscreen drivers on your computer. It is strongly recomended that you exit all Windows programs before running this Setup program.
Install Serial Touchscreen Drivers
Install USB Touchscreen Drivers
< Back
Next >
Cancel

>> Select touch type “USB touchsreen “


Elo TouchSystems Setup (Version 4.30)
License Agreement
Please read the following license agreement carefully. Press the PAGE DOWN key to see the rest of the agreement.
End-User License Agreement
BY DOWNLOADING AND/OR INSTALLING THE SOFTWARE YOU ARE AGREEING TO BECOME BOUND BY THE TERMS OF THIS AGREEMENT, INCLUDING THIS SOFTWARE PRODUCT LICENSE AND LIMITED WARRANTY.
IMPORTANT READ CAREFULLY: This Elo TouchSystems End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a
Do you accept the terms of the preceding license agreement? If you choose No, you will not have full touchmonitor functionality and setup will close. To have full functionality you must accept the license agreement.
< Back
Yes
No

>>Confirm licence agreement




Elo TouchSystems Setup (Version 4.30)
TOUCHSYSTEMS
Setup Complete
Setup has finished installing the Elo touchscreen drivers and components.
You can choose to calibrate your Elo Touchscreen monitors after setup finishes.
Calibrate Elo Touchscreen monitors.
View readme.
Click Finish to exit Setup.
< Back
Finish

>>Start touch calibration

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After complete installation and calibration of touch you find a new icon in the control panel to set additional features.

4.2.2 Install EC1 fieldbus driver

Basically your system is perpared as one of the possible fieldbus interfaces.

That means that the firmware of the controller inside is programmed, and the needed fieldbus module is mounted.

To get access from your operating system to this controller you had to install the so called CIF device driver.

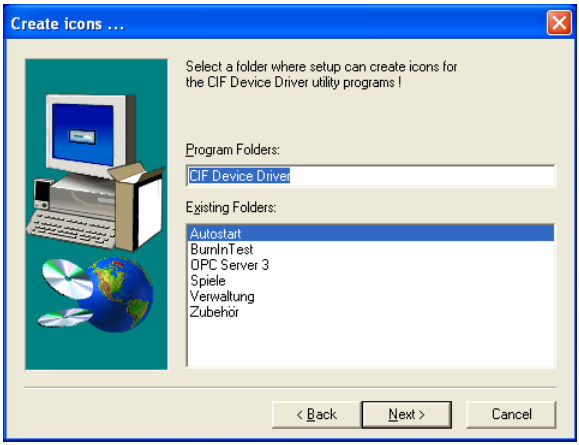
You find this driver on the provided Hilscher system software CD in the folder DRIVER.

Start installation with program **SETUP.EXE** at this folder.

Welcome
Welcome to the CIF Device Driver Setup program. This program will install CIF Device Driver on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next >
Cancel

Copy CIF Device Driver components..
Please enter a directory, where the setup program should copy the device driver utilities.
Normaly you can choose your application directory !
Destination Folder
C:\Programme\CIF Device Driver
Browse...
< Back
Next >
Cancel

>>Select your destination folder



>> Choose your program description

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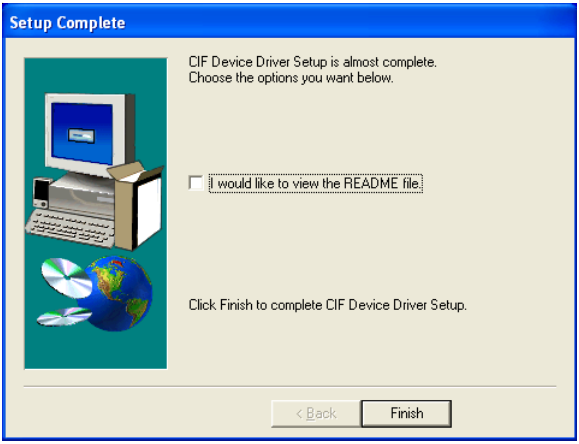

Setup Complete
CIF Device Driver Setup is almost complete.
Choose the options you want below.
I would like to view the README file.
Click Finish to complete CIF Device Driver Setup.
< Back
Finish

5. TECHNICAL DETAILS

5.1 MECHANICAL

Features	V Panel				
Model	104	121	150	170	190
Display size	10,4“	12.1”	15”	17”	19”
Dimension panelmount H x W x D	295 x 348 x 121mm	327 x 400 x 121mm	362 x 452 x 123mm	390 x 465 x 130mm	426 x 516 x 135mm
Front Bezel	ALU or stainless steel optional				
Weight	6,6 kg	8 kg	9,85kg	11,7kg	13,4kg
Protection class	IP65 Front (NEMA 250 type 12 and 13)				

5.2 ELECTRONICAL

Features	V Panel				
Model	104	121	150	170	190
Max. resolution	800 x 600	800 x 600	1024 x 768	1280 x 1024	1280 x 1024
Brightness	350CD /m^2	350CD /m^2	250CD /m^2	250CD /m^2	250CD /m^2
Front Bezel	ALU or stainless steel optional				
Touch screen	Resistive analog				
Function keys	Optional 16 up to 112 freely programmable keys				
Processor	Intel Celeron 600 MHz Intel Pentium M 1.1 GHz				
Main memory	Up to 1024 Mbyte				
External interfaces	3x USB (1xfront, 2x rear side); 2x PS/2; 1x LPT; 1x LAN 10/100; 1x LAN 100/1000; 4x RS232				
Free Slots	2x PCI, PCMCIA slot optional				
Field Buses	CANopen or DeviceNet or Profi bus or CAN				
Internal Drives	CompactFlash up to 2 GByte, HDD optional				
Drives side accessible	HDD				
Verified OS	Windows XP, Windows XP embedded, Linux				
Power Supply	24 VDC +/- 20% with protection against reverse polarity.				
Power consum.	62W				
I max	3,32 W				
Battery	External Lithium 3,5V 750mAh				
MTBF	< 40000 h (excluding backlight tube)				

5.3 ENVIRONMENT

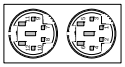
Features	V Panel all models
Temperature	Operating: 0° to +50°C Storage: -25° to +70°C
Humidity	Operation: 5 to 95% non condensino Storage: 5 to 95% non condensing
Cooling	Fanless cooling concept
Shock acc. DIN EN 60068-2-27	Operating: 15G, 11ms duration Storage: 50G, 11ms duration (half-sinus)
Vibration acc. DIN EN 60068-2-27	Operating: 10000 ft (3,048m) Storage: 15000 ft (4,622m)
Altitude	Operating: 10-500 Hz: 1G / 3 axis Storage: 10-500 Hz: 2G / 3 axis

5.4 CE DIRECTIVES AND STANDARDS

Features	V Panel all models
EMC	US: FCC47 CFR PART 15; Class A level CE: EN61000-6-2; EN55022/A (CISPR22)I
Approvals	CE, FCC, cULus
RoHS Compliant	Yes

5.5 CONNECTOR PINOUT

PS/2 Keyboard/Mouse Connector



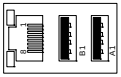
Keyboard

PIN	Signal Name	PIN	Signal Name
1	KBDATA#	2	NC
3	GND	4	VCC
5	KBCLK#	6	NC

Mouse

PIN	Signal Name	PIN	Signal Name
7	MSDATA#	8	NC
9	GND	10	VCC
11	MSCLK#	12	NC

LAN + Dual USB Combo Connector



LAN

PIN	Signal Name	PIN	Signal Name
1	TX+	2	TX-
3	RX+	4	NC
5	NC	6	RX-
7	NC	8	NC

USB

PIN	Signal Name	PIN	Signal Name
A1	VCC	B1	VCC
A2	Data-	B2	Data-
A3	Data+	B3	Data+
A4	Gnd	B4	Gnd

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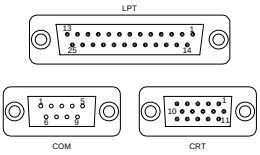
LPT, COM1, COM2, VGA Connector



LPT

PIN	Signal Name	PIN	Signal Name
1	Strobe#	2	Data 0
3	Data 1	4	Data 2
5	Data 3	6	Data 4
7	Data 5	8	Data 6
9	Data 7	10	ACK#
11	BUSY#	12	PE
13	SELECT	14	AFD#
15	ERROR#	16	INIT#
17	SLIN#	18	GND
19	GND	20	GND
21	GND	22	GND
23	GND	24	GND
25	GND		

COM

PIN	Signal Name	PIN	Signal Name
1	DCD (Data Carrier Detect)	2	RXD (Receive data)
3	TXD (Transmit Data)	4	DTR (Data terminal ready)
5	GND	6	DSR(Data set ready)
7	RTS (Request to send)	8	CTS (Clear to send)
9	RI (Ring indicator)		

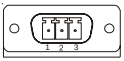
CRT

PIN	Signal Name	PIN	Signal Name
1	RED	2	Green
3	Blue	4	NC
5	CRTGND	6	CRTGND
7	CRTGND	8	CRTGND
9	VCC	10	CRTGND
11	NC	12	DDCDAT
13	HSYNC	14	VSYNC
15	DDCCLK		

LAN2 Port

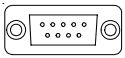
PIN	Signal Name when 82541ER loaded 10/100/1000 Base T	Signal name when 82551xx loaded 10/100 BaseT
1	MX_0+	TXD+
2	MX_0-	TXD-
3	MX_1+	RXD+
4	MX_2+	NC
5	MX_2-	NC
6	MX_1-	RXD-
7	MX_3+	NC
8	MX_3-	NC

Power Connector



PIN	Signal Name
1	GND
2	NC
3	24V IN

RS232 Connector

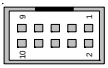


PIN	Signal Name
1	DCD (Data Carrier Detect)
2	RXD (Receive Data)
3	TXD (Transmit Data)
4	DTR (Data Terminal Ready)
5	GND
6	DSR (Data Set Ready)
7	RTS (Request To Send)
8	CTS (Clear To Send)
9	RI (Ring Indicator)

Speaker interface J34

PIN	Signal Name	PIN	Signal Name
1	Speaker	3	GND
2	NC	4	VCC

Serial port COM3 , COM4 J3



PIN	Signal Name	PIN	Signal Name
1	DCD (Data Carrier Detect)	2	DSR (Data Set Ready)
3	RXD (Receive Data)	4	RTS (Request To Send)
5	TXD (Transmit Data)	6	CTS (Clear To Send)
7	DTR (Data Terminal Ready)	8	RI (Ring Indicator)
9	GND	10	POWER (+12V)

Backlight interface J6

PIN	Signal Name
1	Backlight Inverter supply voltage
2	GND
3	Brightness Control (0V max. Brightness, 5V min. Brightness)
4	Brightness Control (12V max. Brightness, 6V min. Brightness)
5	Enable

Advanced power button interface J12

PIN	Signal Name
1	+3V STANDBY
2	GND
3	LED+
4	LED-

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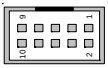
External battery connector J13

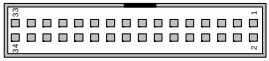
PIN	Signal Name
1	GND
2	NC
3	NC
4	V_BAT

Internal Fieldbus interface J15



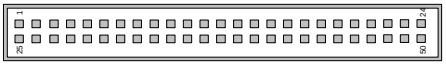
PIN	Signal Name	PIN	Signal Name
1	+5V	2	STATUS
3	CAN RX	4	CAN TX
5	PROFIBUS RX	6	PROFIBUS TX
7	PROFIBUS ENABLE	8	ERROR
9	GND	10	+12V

Floppy disk drive interface J16



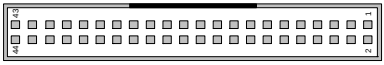
PIN	Signal Name	PIN	Signal Name
1	GND	2	DENSEL#
3	GND	4	NC
5	NC	6	NC
7	GND	8	FDINDEX# (Index)
9	GND	10	FDMOTEA# (Motor Enable A)
11	GND	12	FDDRVSB# (Drive Select B)
13	GND	14	FDDRVSA# (Drive Select A)
15	GND	16	FDMOTEB# (Motor Enable B)
17	GND	18	FDDIR# (Stepper Motor Direction)
19	GND	20	FDSTEP# (Step Pulse)
21	GND	22	FDWD# (Write Data)
23	GND	24	FDWG# (Write Enable)
25	GND	26	FDTRK0# (Track 0)
27	GND	28	FDWPD# (Write Protect)
29	NC	30	FDRD# (Read Data)
31	GND	32	FDSIDE# (Side 1 Select)
33	NC	34	DSKCHG# (Diskette Change)

Secondary IDE Compact flash J17



PIN	Signal Name	PIN	Signal Name
1	GND	26	NC
2	Data 3	27	Data 11
3	Data 4	28	Data 12
4	Data 5	29	Data 13
5	Data 6	30	Data 14
6	Data 7	31	Data 15
7	CS0#	32	CS1#
8	GND	33	NC
9	GND	34	IOR#
10	GND	35	IOW#
11	GND	36	VCC
12	GND	37	IRQ
13	VCC	38	VCC
14	GND	39	M#/S (Compact Flash)
15	GND	40	NC
16	GND	41	RESET#
17	GND	42	IORDY
18	ADDR2	43	REQ#
19	ADDR1	44	ACK#
20	ADDR0	45	Active#
21	Data 0	46	DIAG
22	Data 1	47	Data 8
23	Data 2	48	Data 9
24	NC	49	Data 10
25	NC	50	GND

Primary IDE Connector UDMA33 J18



PIN	Signal Name	PIN	Signal Name
1	RESET#	2	GND
3	Data 7	4	Data 8
5	Data 6	6	Data 9
7	Data 5	8	Data 10
9	Data 4	10	Data 11
11	Data 3	12	Data 12
13	Data 2	14	Data 13
15	Data 1	16	Data 14
17	Data 0	18	Data 15
19	GND	20	NC
21	DRQ#	22	GND
23	IOW#	24	GND
25	IOR#	26	GND
27	IORDY	28	GND
29	ACK#	30	GND
31	IRQ	32	NC
33	ADDR1	34	PDIAG
35	ADDR0	36	ADDR2
37	CS0#	38	CS1#
39	Active#	40	GND
41	+5V	42	+5V
43	GND	44	NC

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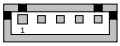
IrDA/FIR connector J21

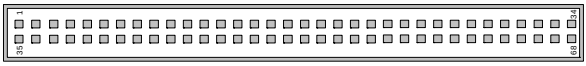


PIN	Signal Name
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX

PCI Edge card Master connector J24

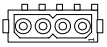
PIN	Signal Name	PIN	Signal Name	PIN	Signal Name	PIN	Signal Name
A1	NC	B1	-12V	A32	AD16	B32	AD17
A2	+12V	B2	NC	A33	+3.3V	B33	CBE2#
A3	NC	B3	GND	A34	FRAME#	B34	GND
A4	NC	B4	NC	A35	GND	B35	IRDY#
A5	+5V	B5	+5V	A36	TRDY#	B36	+3.3V
A6	INTA#	B6	+5V	A37	GND	B37	DEVSEL#
A7	INTC#	B7	INTB#	A38	STOP#	B38	GND
A8	+5V	B8	INTD#	A39	+3.3V	B39	LOCK#
A9	NC	B9	NC	A40	NC	B40	PERR#
A10	+5V (I/O)	B10	REQ1#	A41	NC	B41	+3.3V
A11	NC	B11	NC	A42	GND	B42	SERR#
A12	GND	B12	GND	A43	PAR	B43	+3.3V
A13	GND	B13	GND	A44	AD15	B44	CBE1#
A14	GNT1#	B14	PCICLK1	A45	+3.3V	B45	AD14
A15	RESET#	B15	GND	A46	AD13	B46	GND
A16	+5V (I/O)	B16	PCICLK2	A47	AD11	B47	AD12
A17	GNT0#	B17	GND	A48	GND	B48	AD10
A18	GND	B18	REQ0#	A49	AD09	B49	GND
A19	REQ2#	B19	+5V (I/O)	A50	Key	B50	Key
A20	AD30	B20	AD31	A51	Key	B51	Key
A21	+3.3V	B21	AD29	A52	CBE0#	B52	AD08
A22	AD28	B22	GND	A53	+3.3V	B53	AD07
A23	AD26	B23	AD27	A54	AD06	B54	+3.3V
A24	GND	B24	AD25	A55	AD04	B55	AD05
A25	AD24	B25	+3.3V	A56	GND	B56	AD03
A26	NC	B26	CBE3#	A57	AD02	B57	GND
A27	+3.3V	B27	AD23	A58	AD00	B58	AD01
A28	AD22	B28	GND	A59	+5V (I/O)	B59	+5V (I/O)
A29	AD20	B29	AD21	A60	NC	B60	NC
A30	GND	B30	AD19	A61	+5V	B61	+5V
A31	AD18	B31	+3.3V	A62	+5V	B62	+5V

PCMCIA connector J25



PIN	Signal Name	PIN	Signal Name
1	GND	35	GND
2	AD0_Data 3	36	CD1
3	AD1_Data 4	37	AD2_Data 11
4	AD3_Data 5	38	AD4_Data 12
5	AD5_Data 6	39	AD6_Data 13
6	AD7_Data 7	40	RSVD_Data 14
7	C/BE0#_CE1	41	AD8_Data 15
8	AD9_A10	42	AD10_CE2
9	AD11_OE#	43	VS1
10	AD12_A11	44	AD13_RSVD_IOR#
11	AD14_A9	45	AD15_RSVD_IOW#
12	C/BE1#_A8	46	AD16_A17
13	PAR_A13	47	RSVD_A18
14	PERR#_A14	48	LOCK#_A19
15	GNT_WE	49	STOP#_A20
16	INTX_READY_IREQ	50	DEVSEL#_A21
17	AVCC	51	AVCC
18	AVCCP	52	AVCCP
19	CLK_A16	53	TRDY#_A22
20	IRDY#_A15	54	FRAME#_A23
21	C/BE2X_A12	55	AD17_A24
22	AD18_A7	56	AD19_A25
23	AD20_A6	57	VS2
24	AD21_A5	58	RESET#
25	AD22_A4	59	SERR#_WAIT#
26	AD23_A3	60	REQ#_RSVD_INPACK
27	AD24_A2	61	C/BE3#_REG
28	AD25_A1	62	AUDIO_BVD2
29	AD26_A0	63	STSCHG_BVD1_STSCHG
30	AD27_Data 0	64	AD28_Data 8
31	AD29_Data 1	65	AD30_Data 9
32	RSVD_Data 2	66	AD31_Data 10
33	CLKRUN_WP_IOCS16#	67	CD2
34	GND	68	GND

Internal HDD power interface J26



PIN	Signal Name
1	+12V
2	GND
3	GND
4	+5V

4 and 5 wire Tochconnector J29

PIN	Signal Name
1	Upper Right (5-wire)
2	Lower Right (5-wire)
3	Sense (5-wire)
4	Upper Left (5-wire)
5	Lower Left (5-wire) and Top Side (4-wire)
6	Bottom Side (4-wire)
7	Left Side (4-wire)
8	Right Side (4-wire)

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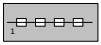
DMC touchcontroller interface (option) J30



PIN	Signal Name
1	XM
2	YM
3	XP
4	YP

Internal USB interfaces J31/J32

PIN	Signal Name	PIN	Signal Name
1	+5V	1	+5V
2	Data0-	2	Data2-
3	Data0+	3	Data2+
4	GND	4	GND
5	+5V	5	+5V
6	Data1-	6	Data3-
7	Data1+	7	Data3+
8	GND	8	GND

ATX Power button J36

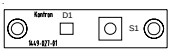
PIN	Signal Name
1	+3V STANDBY
2	GND

Front USB

PIN	Signal Name	PIN	Signal Name
A1	VCC	B1	VCC
A2	Data-	B2	Data-
A3	Data+	B3	Data+
A4	Gnd	B4	Gnd

5.6 OPTIONS

5.6.1 Operating Panel



S1 is used to power on the system after standby. D1 indicates the status of power on.

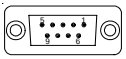
PIN	Signal Name
1	LED-
2	LED+
3	GND
4	Powerbutton

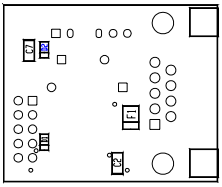
D1 LED Status

D1	Status
Green	Power on
Orange	Standby

5.6.2 Fieldbus modules (optional)

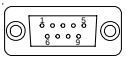
5.6.2.1 Profibus module

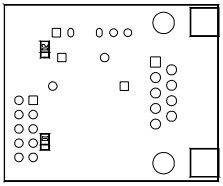




PIN	Signal Name
1	NC
2	NC
3	RXD-P/TXD-M
4	ISODE
5	ISOLATET GND
6	ISOLLATED +5V
7	NC
8	RXD-M/TXD-M
9	NC

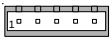
5.6.2.2 Canbus module

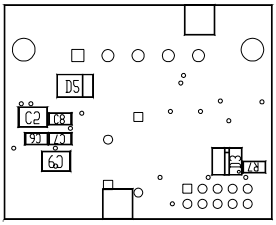




PIN	Signal Name
1	NC
2	CANL
3	ISOLATED GND
4	NC
5	NC
6	NC
7	CANH
8	NC
9	NC

5.6.2.3 DeviceNet module





PIN	Signal Name
1	GND
2	CANL
3	SHIELD
4	CANH
5	+24V

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Werner-von-Siemens Str.1
D - 93426 Roding
Tel: +49 9461 950 - 0
Fax: +49 9461 950 - 100

5.7 BLOCK DIAGRAM

The diagram displayed below shows the main internal function blocks of the Panel.

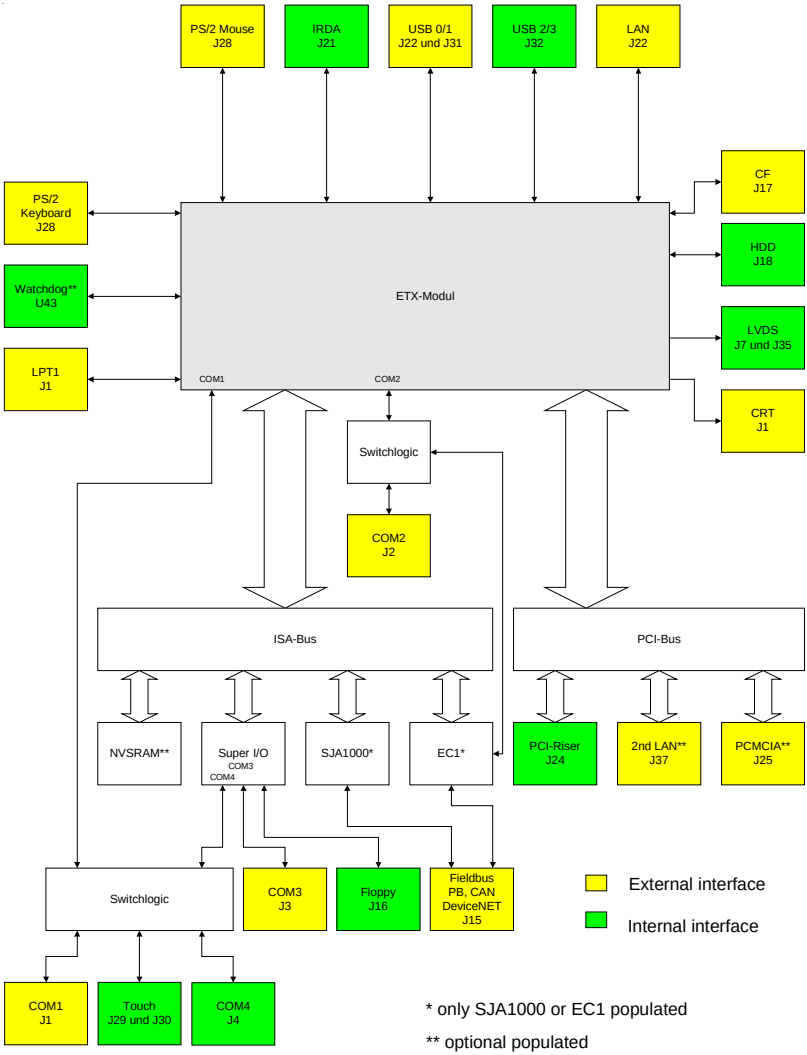

fig. 5-1

6. MAINTENANCE

The Panel is designed and produced according to DIN EN ISO 9000:2000. One of the main development intentions was to minimice service requirements. As a result, with exception changing CMOS-Ram battery and cleaning, no great service is to do.

In case off any error kindly note the remarks below.

To analyze the error please check first all connections and configuration of the software. Don't try to repair the hardware inside.

No warranty if improper operated

6.1 CUSTOMER SERVICE

To get more technical information and help concerning errors on the Panel please contact Kontron customer service.

Tel: **+49 (0)9461 950 104**
Fax: **+49 (0)9461 950 200**
E-Mail: **support@kontron.com**
Internet: **http://www.kontron.com**

6.2 CLEANING

To clean the surface of the Panel use a soft lint-free cloth. It should be slightly moist with a mild detergent solution or any computer cleaning kit.

Never use alcohol, petroleum-based solvents or aggressive agents to clean the Panel. Also never poor any liquids directly in the Panel PC Box.

To clean the liquid-crystal display (LCD) screen use soft clean lintfree cloth, moist with a mild glass cleaner, and gently wipe the surface. Never apply liquids directly on the screen surface. Do not use paper towels to clean the display screen. Paper can scratch the display touch film.

6.3 RETURN AND REPAIR

Kontron Embedded Computers GmbH has started a service management system according DIN EN ISO 9001:2000 to reduce the terms of repair. This provides a fast, high quality and effective repair.

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6.3.1 Return Material Authorization Numbers (RMA)

Before send back the defective device please follow the hints below then request a RMA number from Kontron customer service.

- Return only Kontron product specified on the RMA request.
- Request a separate new RMA number for each Kontron product.
- If we receive a shipment containing not authorized products, we may send it back.
- Please check before requesting an RMA number if there is a real defect on the system. If not we could charge the costs for handling.

To request a RMA number fill out the form „Fault report“ and send him to Kontron customer support. You can get the form as a download on http://www.kontron.com. For additional questions please contact the customer service by fax or Email.

Fill out all the menu items on the form and send it to Kontron by FAX or online.

Describe the error as detailed as possible. A detailed report is a base for a fast and effective analyze of errors and repair.

After getting back the “Fault report” send the defective device, including the fault report and your delivery note, to the following address:

Kontron Embedded Computers GmbH
Warenannahme Service
Werner-von-Siemens-Str. 1
D-93426 Roding

6.4 PACKAGING

To return a system use the original Kontron or equivalent packaging. Parts or components of the system must be returned in anti-static-bags.

Always enclose a copy of the original delivery note and the fault report.

Kontron is not responsible for damage during shipment. We recommend that you insure the shipment.

7. TROUBLESHOOTING

7.1 FAQ

Please look to the online support at www.kontron.com

8. DISPOSAL

In order to dispose your Panel, it must be removed from the plant and fully dismantled. Electronic part such as disc drives and circuit boards must be disposed of in accordance with national electronic scrap regulations.

For details ask your local waste disposal department.

9. APPENDIX

ILLUSTRATION CONTENTS

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